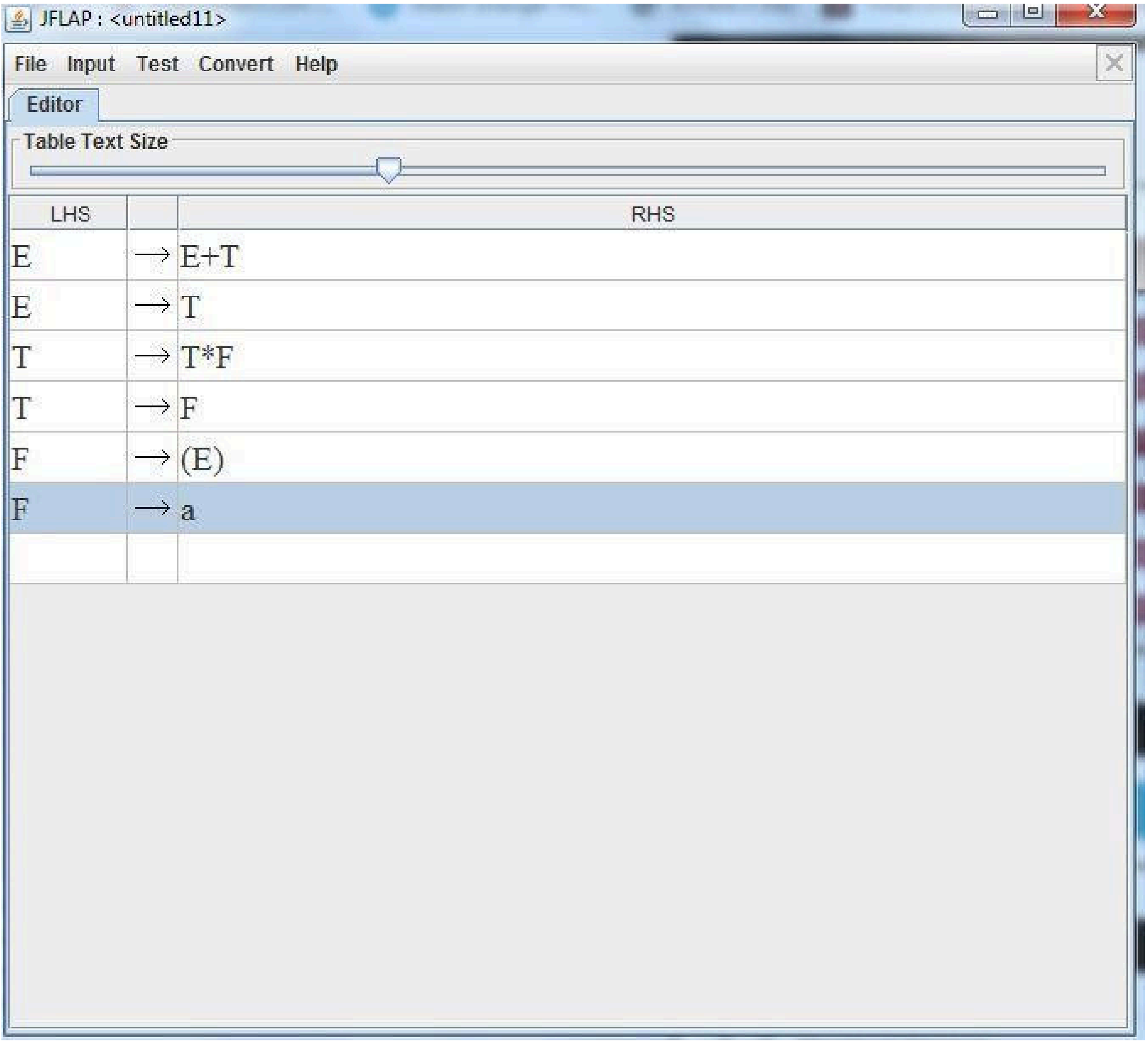
Practical 6: Using JFLAP, create SLR(1) parse table for a given grammar. Simulate parsing and output the parse tree in proper format.

Aim: Using JFLAP create SLR(1) parse table for a given grammar. Simulate parsing and output the parse tree proper format.

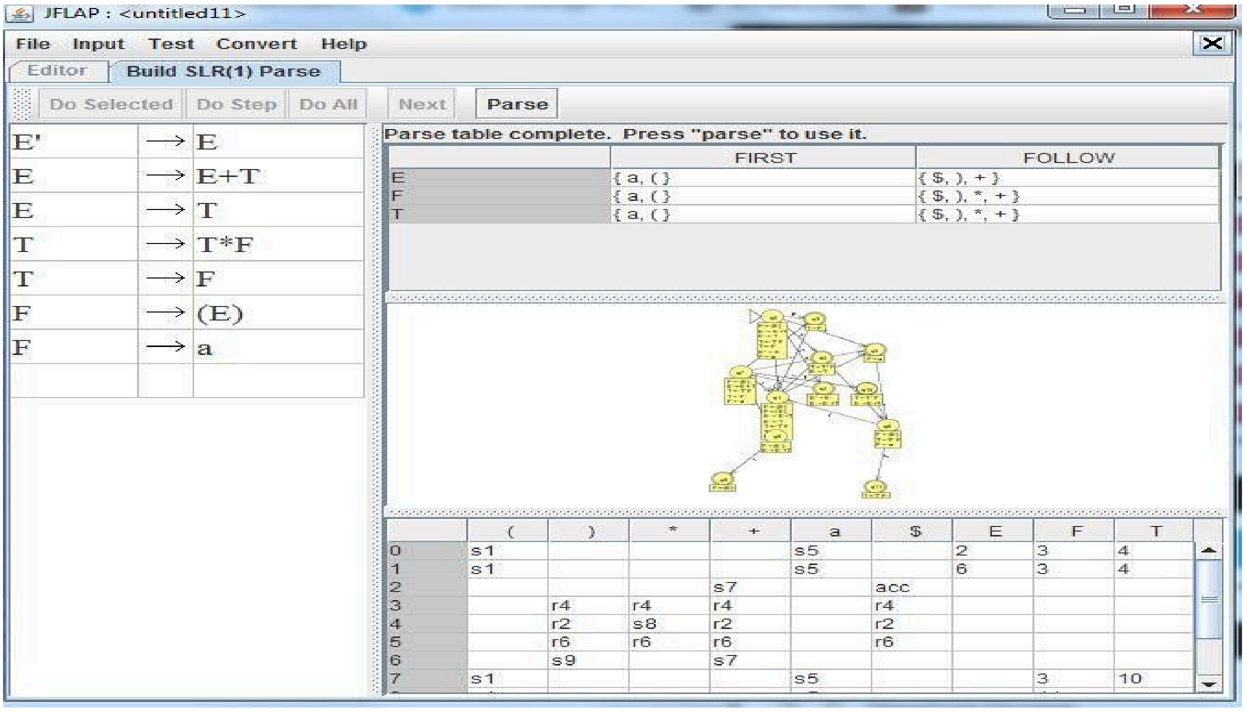
Implementation: -

Step 1: - Choose the grammar from JFLAP and insert grammar you want to create SLR(1) parsing table.



LHS		RHS
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a

Step 2: - Select the Input from Menu and select Build SLR (1) parsing table from it.



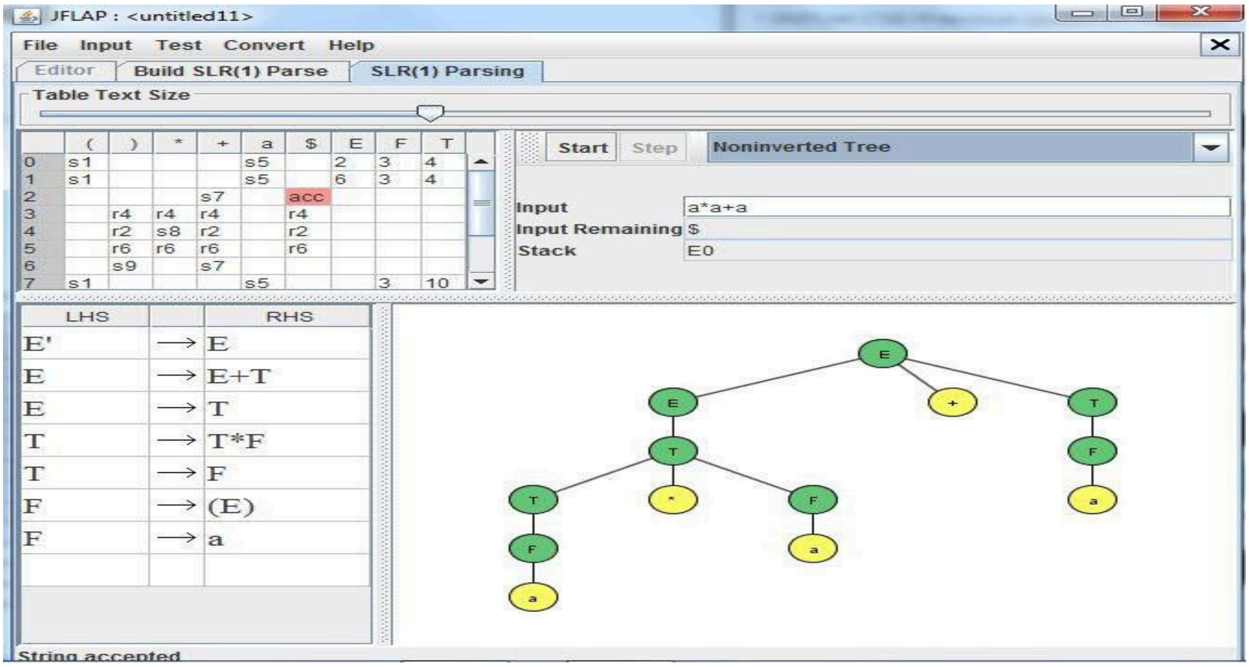
E'	→	E
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a

Parse table complete. Press "parse" to use it.

	FIRST	FOLLOW
E	{ a, (}	{ $,), + }
F	{ a, (}	{ $,), *, + }
T	{ a, (}	{ $,), *, + }

	(	)	*	+	a	$	E	F	T
0	s1				s5		2	3	4
1	s1				s5		6	3	4
2				s7		acc			
3		r4	r4	r4		r4			
4		r2	s8	r2		r2			
5		r6	r6	r6		r6			
6		s9		s7					
7	s1				s5			3	10

Step 3: - Now select parse to use that table to create parse tree from it.



	(	)	*	+	a	$	E	F	T
0	s1				s5		2	3	4
1	s1				s5		6	3	4
2				s7		acc			
3		r4	r4	r4		r4			
4		r2	s8	r2		r2			
5		r6	r6	r6		r6			
6		s9		s7					
7	s1				s5			3	10

Input a*a+a
Input Remaining $
Stack E0

LHS		RHS
E'	→	E
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a

String accepted

Result :- We created SLR(1) parse table for a given grammar and Simulated parsing and output the parse tree proper format.